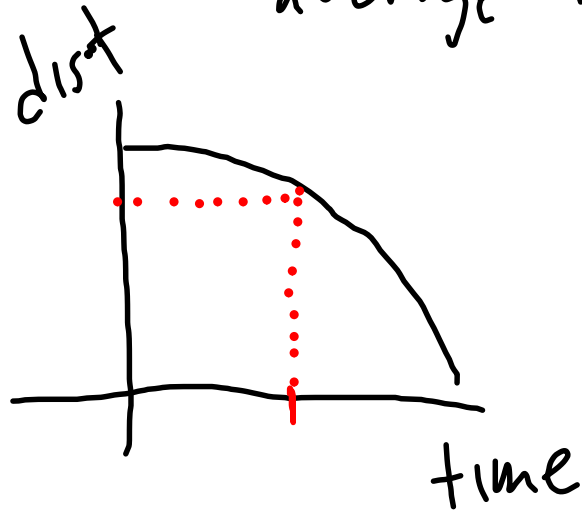


2.4 difference quotients
average rate of change

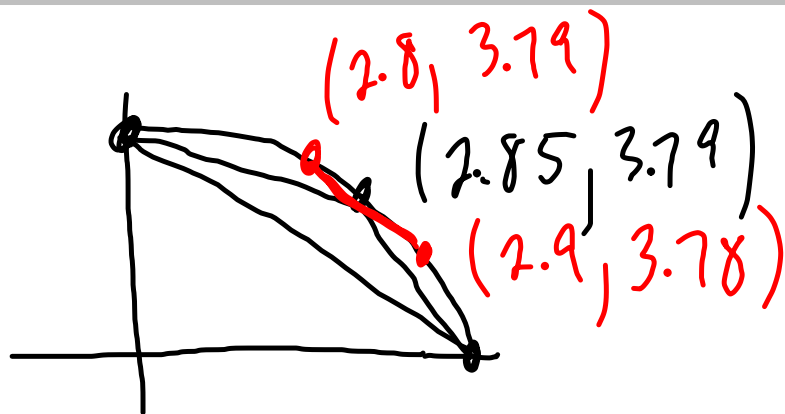


Trace's walk

curve - acceleration
velocity changes

How fast did Trace
walk?
ave velocity ↓

It depends
on which pt.
in time.



How fast at 2.85 sec?
 How can we estimate this?

$$\text{ave vel} = \frac{\Delta d}{\Delta t}$$

symmetric difference quotient

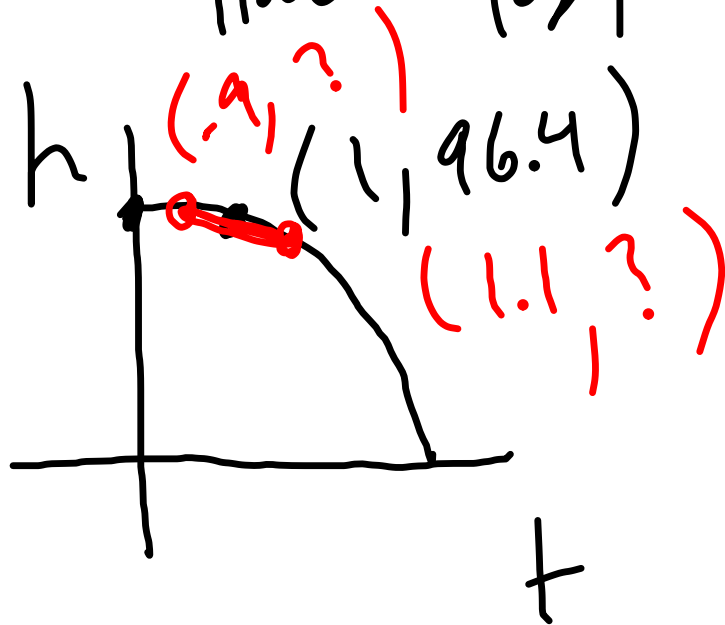
$$\frac{3.78 - 3.79}{2.9 - 2.8} = -.1 \frac{\text{m}}{\text{s}}$$

left or

right diff quotient

$$h(t) = 100 - 3.6 t^2$$

How fast at $t=1$?



Define $h(t) = 100 - 3.6 t^2$

$$\frac{h(1.1) - h(.9)}{1.1 - .9} = -7.2 \frac{m}{s}$$